Cyanoacrylate Adhesive in Feline Corneal Sequestrum

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In the Literature

Pumphrey SA, Desai SJ, Pizzirani S. Use of cyanoacrylate adhesive in the surgical management of feline corneal sequestrum: 16 cases (2011-2018). *Vet Ophthalmol*. 2019;22(6):859-863.

FROM THE PAGE ...

Feline corneal sequestrum is poorly understood, can cause significant discomfort, and may lead to corneal perforation and loss of vision. Feline corneal sequestrum should be recognized quickly and, in most patients, treated surgically. There is no consensus on a gold standard surgical procedure, suggesting that a single surgical option may not suit all patients.

This study reviewed medical records of 16 cats diagnosed with corneal sequestrum and treated with lamellar keratectomy and cyanoacrylate adhesive. Following keratectomy, a single drop of cyanoacrylate was placed on the corneal surface and painted into the defect to form a continuous layer covering the entire keratectomy site. A bandage contact lens was then placed once the adhesive polymerized; median procedure time was 10 minutes.

Patients were treated postoperatively with topical antibiotics, lubricants, and pain medication, ± antiviral medication; rechecks were performed at 1 and 3 weeks postoperation and later if necessary. Medications were discontinued once the cyanoacrylate was no longer present and the defect had completely healed; median time to cessation of topical medications was 4 weeks. Recurrence rate was 13%, similar to other reported surgical techniques for corneal sequestrum. Purebred status was the only significant factor in cats that experienced recurrence. No significant complications were seen.

... TO YOUR PATIENTS

Key pearls to put into practice:

1. In addition to traditional grafting procedures (eg, conjunctival pedicle grafting, corneoconjunctival transposition), the clinician should be aware of an alternative surgical approach using cyanoacrylate adhesive. Pet owners should be educated that this is a safe and successful adjunctive therapy to lamellar keratectomy in cats with midstromal corneal sequestra. Recurrence rates are similar to those seen with traditional grafting procedures.
2. Corneal sequestrum treated with keratectomy and cyanoacrylate adhesive appears to have a low complication incidence; no postoperative infection, keratomalacia, corneal perforation, or other complications were reported in this study. This procedure may be more time efficient than previously described procedures and may provide benefits of decreased anesthesia time, shorter postoperative treatment duration, and, potentially, lower procedure costs.
3. Proper magnification and microsurgical instruments should be used for the lamellar keratectomy that precedes application of the cyanoacrylate adhesive.